Atty. Dkt. No.: 03CR095/KE

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An airborne radar system, comprising:

a radar antenna;

radar circuitry coupled to the radar antenna;

a runway database comprising runway location information;

a processing device retrieving from the runway database, runway location information for a runway being approached by an aircraft, based on the location of the aircraft, and directing a radar beam defined by a polygon which represents the runway and which is derived from the runway information, the processing device determining whether there are any obstacles on the runway.

2. (Original) The airborne radar system of claim 1, wherein the location of the aircraft is provided using a position sensor in communication with the processing system.

3. (Original) The airborne radar system of claim 1, wherein the polygon is defined by latitude and longitude.

4. (Original) The airborne radar system of claim 1, wherein the runway database is on board the aircraft.

5. (Original) The airborne radar system of claim 1, wherein the radar beam is a beam sharpened compressed radar.

6. (Original) The airborne radar system of claim 1, wherein the processing device determines the direction of the radar beam based on the location of the polygon.

7. (Original) An airborne sensing system, comprising:

a sensing device for sensing objects outside of an aircraft;

a runway database comprising runway location information;

a processing device retrieving from the runway database, runway location information for a runway being approached by an aircraft, based on the location of the aircraft, registering, the runway location using the sensing device based signal and the runway location information from the database, and directing a radar beam defined by a polygon which represents the runway and which is derived from the runway information, the processing device determining whether there are any obstacles on the runway.

8. (Original) The airborne sensing system of claim 7, wherein the sensing device comprises a synthetic vision device.

9. (Original) The airborne sensing system of claim 7, wherein the sensing device comprises a millimeter wave sensing device.

10. (Original) The airborne sensing system of claim 7, wherein the location of the aircraft is provided using a position sensor in communication with the processing system.

11. (Original) The airborne sensing system of claim 7, wherein the polygon is defined by latitude and longitude.

12. (Original) The airborne sensing system of claim 7, wherein the runway database is on board the aircraft.

13. (Original) The airborne sensing system of claim 7, wherein the radar beam is a beam sharpened compressed radar.

14. (Original) The airborne sensing system of claim 7, wherein the processing device determines the direction of the radar beam based on the location of the polygon.

15. (Currently Amended) A method of detecting an obstacle on a runway, comprising:

retrieving location information relating to the location of an aircraft from a location sensor;

retrieving, based on the location information, data representative of the location of the runway relative to the aircraft;

registering, the runway location using a radar based signal and the data;

sensing within the perimeter of the runway location, the presence of an obstacle by directing a beam sharpened radar at the runway location.

16. (Original) The method of claim 15, further comprising:
determining the location of the obstacle within the perimeter of the runway location.

17. (Original) The method of claim 15, further comprising:
communicating the presence of an obstacle to a pilot of the aircraft.

18. (Original) The method of claim 15, further comprising:
providing an audio alert to the pilot of the aircraft.

19. (Currently Amended) The method of claim 15, ~~further comprising:~~ ~~directing a beam sharpened radar at the runway location~~ wherein the directing is to a portion of the runway.

20. (Original) The method of claim 15, wherein the perimeter of the runway location is defined by a polygon.